

## **Abstract**

**Introduction:** Healthcare workers are exposed to both infectious and non infectious work related hazards to the eye. Though these are common, only recently have they been an area of interest for research.

**Aims and Objectives:** To describe the epidemiological distribution, risk factors and severity of acute hazardous work related exposure of eyes of health care workers in a tertiary healthcare institution and to develop an augmented system for reporting occupational eye injuries

**Methods:** An observational prospective study was done among a total 11,420 staff and students of a tertiary care academic health institution in South India from February 15<sup>th</sup> 2017 to August 14<sup>th</sup> 2017. Using posters in strategic areas, emails and intranet display, awareness regarding reporting these incidents through the dedicated staff and students reporting system was encouraged. All participants fulfilling inclusion criteria were included and, data including demographic details and clinical findings were collected, using a structured questionnaire, entered in Epidata and analysed using SPSS software

**Results:** A total of 94 of the total 11,420 staff and students reported through one of the points of first contact, making the incidence 0.8 % with a 95% CI (0.64%- 0.96%). Of all respondents 82 were staff and 12 were students. Of all 49/94 (52.1%) were up to 30 years of age and 45/94 (47.9%) were above 30 years of age, overall mean age was 31.53 (SD= 8.39) years, 65 of them (69%) were females and 29 (31%) were

males. Of all, 24 out of 94 (25%), of reported exposures were from the nurses (medical and surgical), followed by technicians who reported 17 out of 94 (18%) and housekeeping staff 15 out of 94 (15.9%). Of those who self reported an incident, 47 (50%) were infectious conjunctivitis and 47 (50%) non infectious hazards to the eye. Chemical exposures were majority among non infectious hazards, 26/47 (25.5%) of which Lysol and formalin were commonest, followed by BBF 7(9.6%), chemical with BBF 6 (6.4%), Allergic conjunctivitis 4 (4.3%), foreign body 3 (3.2%) and blunt trauma 1(1.1%). Awareness regarding PPE usage was low. There was a significant association between area of work and occurrence of injury and infection ( $p = 0.046$ ) and among those wearing and not wearing glasses versus injury and infection ( $p = 0.01$ ). The mean time to report was 3.79 (3.53)

**Conclusions:** There is at least a burden of 8/1000 of acute work related infectious and non infectious hazards to the eye among healthcare workers in a tertiary health care setting. Chemical splashes make up nearly 25% of all reported work related hazards to the eye. Factors that may be associated with work related injuries to the eye are spectacles usage, working in clinical areas.

**Key words:** Health-care workers, Blood and body fluids, occupational exposure, occupational safety and health, sickness absenteeism, splashes, underreporting.